

CerOrganic Training Curriculum

Module C533

Unit C533b.1 (WS 5)

504387-LLP-1-2009-1-GR-LEONARDO-LMP

Co-funded by the European Union,
through the Leonardo da Vinci Programme

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1.i. Tutor information

Alex Koutsouris was born in 1959 in Athens, and studied Agricultural Economics in the Agricultural University of Athens. He took an MSc in Agricultural Extension at University College Dublin (Ireland). He carried out a PhD in Agricultural Education & Extension (Agricultural University of Athens). He then was employed as an assistant researcher (AUA), Head of Extension and Rural Development Unit (Development Agency of Karditsa). In 2000 he joined Agricultural University of Athens as a Lecturer (Agricultural Extension & Agricultural Education). He is a member of many Societies and has authored more than 45 articles in peer reviewed conferences and 20 articles in peer reviewed journals in the field of Agricultural Extension & Education. He currently serves as Associate Editor of the "Journal of Agricultural Education & Extension".

1.ii. Introduction

Agronomists (scientists and extensionists), despite the emergence of interactive approaches, still have trouble with (the introduction of) innovation, such as sustainable forms of agriculture. Nowadays, innovation studies increasingly focus on learning itself, with emphasis on facilitation and the processes of human interaction from which learning emerges. Therefore, new communication methods and tools are needed. This unit aims to provide participants with an understanding of innovation and communication as they apply to OA.

1.iii. Aims & objectives

- to present the basics of extension methodology
- to offer various resources as an introduction to extension methodology
- to illustrate problems and problem-solving approaches relating to an extension program suitable for the introduction of organic farming in a conventionally-farmed area

1.iv. Learning outcomes & skills

By the end of this unit, the trainees are expected to:

- have an understanding of the innovation diffusion processes.
- have an understanding of the communication processes (extension methods and techniques) involved in innovation diffusion.
- be familiar with several problems occurring in the field of innovation and communication.
- be competent in drafting an extension program related to the introduction of OA in a farming area.

1.v. Methodology & media

The unit is composed of:

- lecture based on PowerPoint presentation communication/[extension methods)
- team work
- group interaction and discussion

Extension Planning - Communication Methods and Techniques

2. Main part

2.i. Glossary

- **EXTENSION** = extending scientific education beyond the walls of school or university/ agricultural and rural information and advisory services = an essential mechanism for delivering information and advice as an "input" into (modern) farming
- **ADOPTION** = the decision to use or accept a particular idea, method, law or attitude/ choose to take up or follow (an idea, method or course of action)
- **ADAPTATION** = the process of changing to suit different conditions/ the process of changing something so that it can be used for a different purpose
- **COMMUNICATION** = a process by which information is exchanged between individuals through a common system of symbols, signs or behaviour/ the process of giving information or of making ideas and emotions known to someone

2.i. Glossary (cont'd)

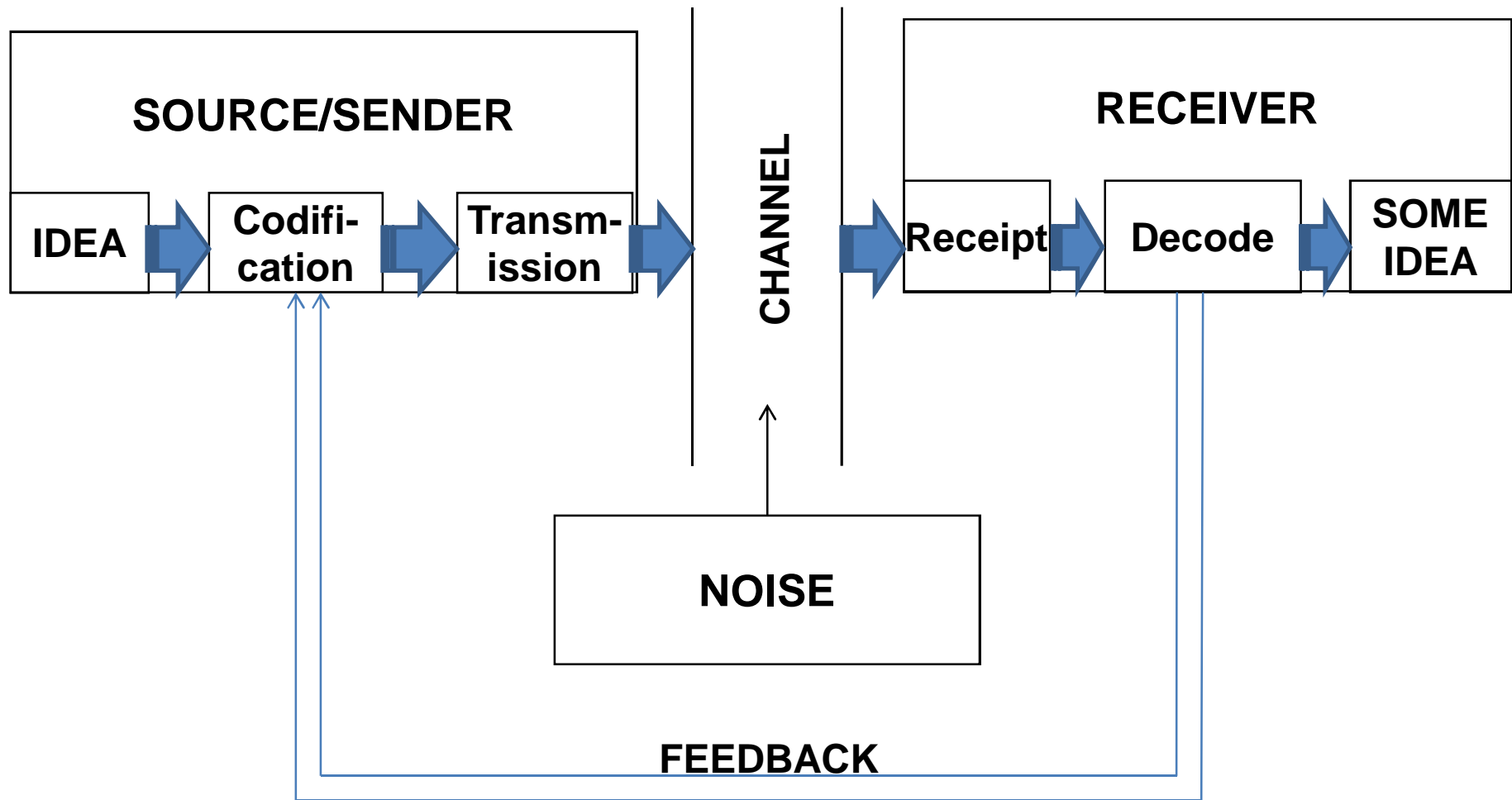
- ENCODE = to express what you want to say in a language/ to arrange systematically/ to reduce to a code
 - DECODE = to succeed in understanding the meaning of a message
 - FACILITATION = the process of enabling groups to work cooperatively and affectively/ to guide and support a group
 - INVENTION = the first occurrence of an idea for a new product or process
 - INNOVATION = the first commercialisation of an idea/ something (idea, practice) that is (qualitatively) new to the area
- product innovations (goods or services/ what is produced)
process innovations (technological or organizational/ how are goods and services produced).

2.ii. Presentation

Adoption of OA

- Diffusion of innovations (farmer and farm characteristics)
- Behavioural approach (motives, values and attitudes determine farmers' decision-making processes) -> farmers' types and their rationale have been identified
- farmers' biographical trajectories
- debates have emerged on the importance of various factors: a) socio-demographic and economic variables; b) perceptions and attitudes; c) the influence of the former on the latter

- Factors found to influence the decision to convert include the age of the farmer, his/her education and professional experience, income, farm characteristics (including the intensity of farming practices), expectations with regard to succession, the information environment and social networks (especially 'important others'). There has also been recognition of the importance of farmers' reasons or motivations (especially risk-aversion) and their antecedent variables, in attempting to explain their propensity to adopt organic farming.
- Furthermore, institutional rules (scheme factors), organic food market structure, policy awareness and support, research and information services, social acceptance and public support for organic farming are all influencing factors.



The Adaption Process

Has five distinct stages:

- awareness,
- interest,
- evaluation,
- trial, and
- adoption/partial adoption/rejection.

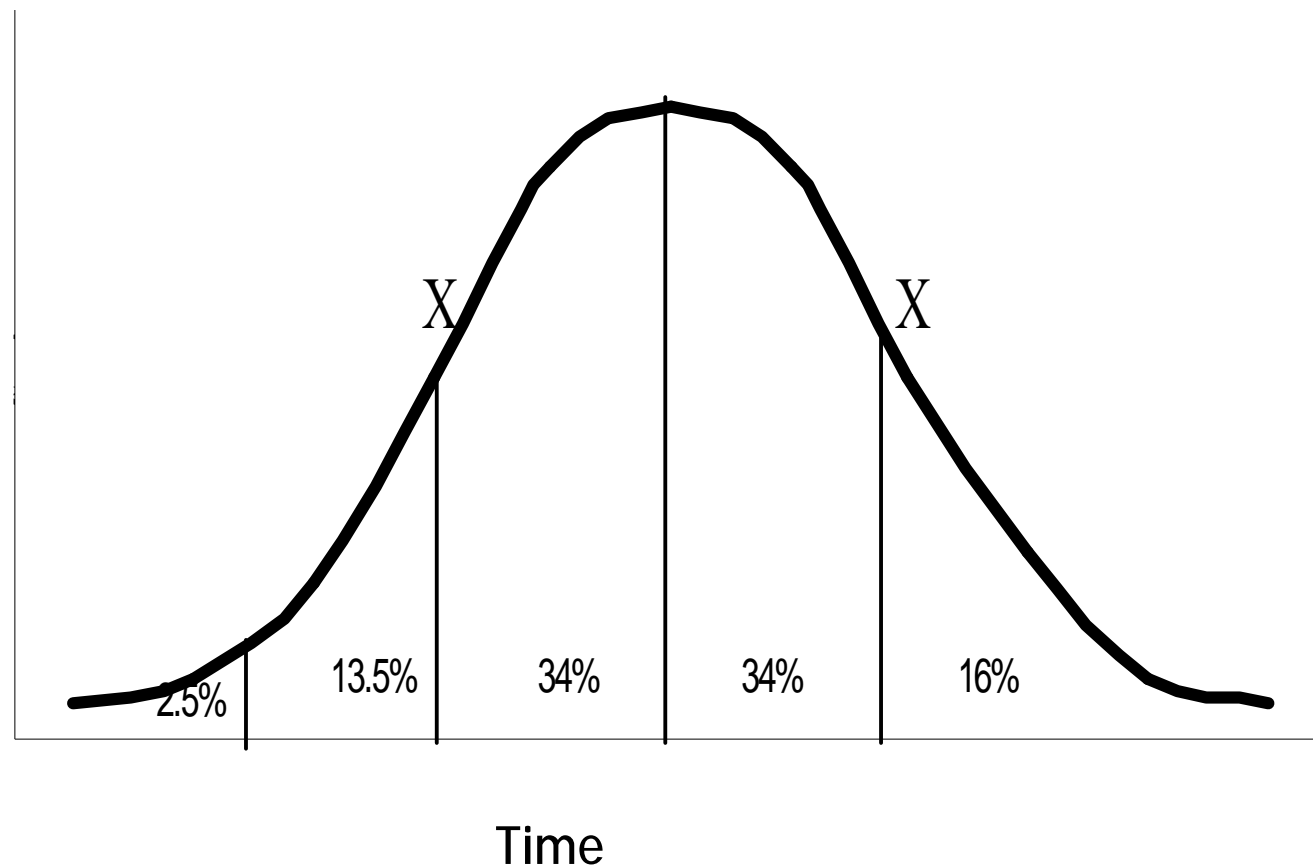
Transfer of Technology (TOT)

For decades the research-extension-farmer linkage was based on a rather simple model. In order to achieve development, "modern" research results had to be transferred to the "traditional" farmer through extension (one-way communication).



Diffusion of Innovations (Rogers)

Cumulative
percentage
of adopters

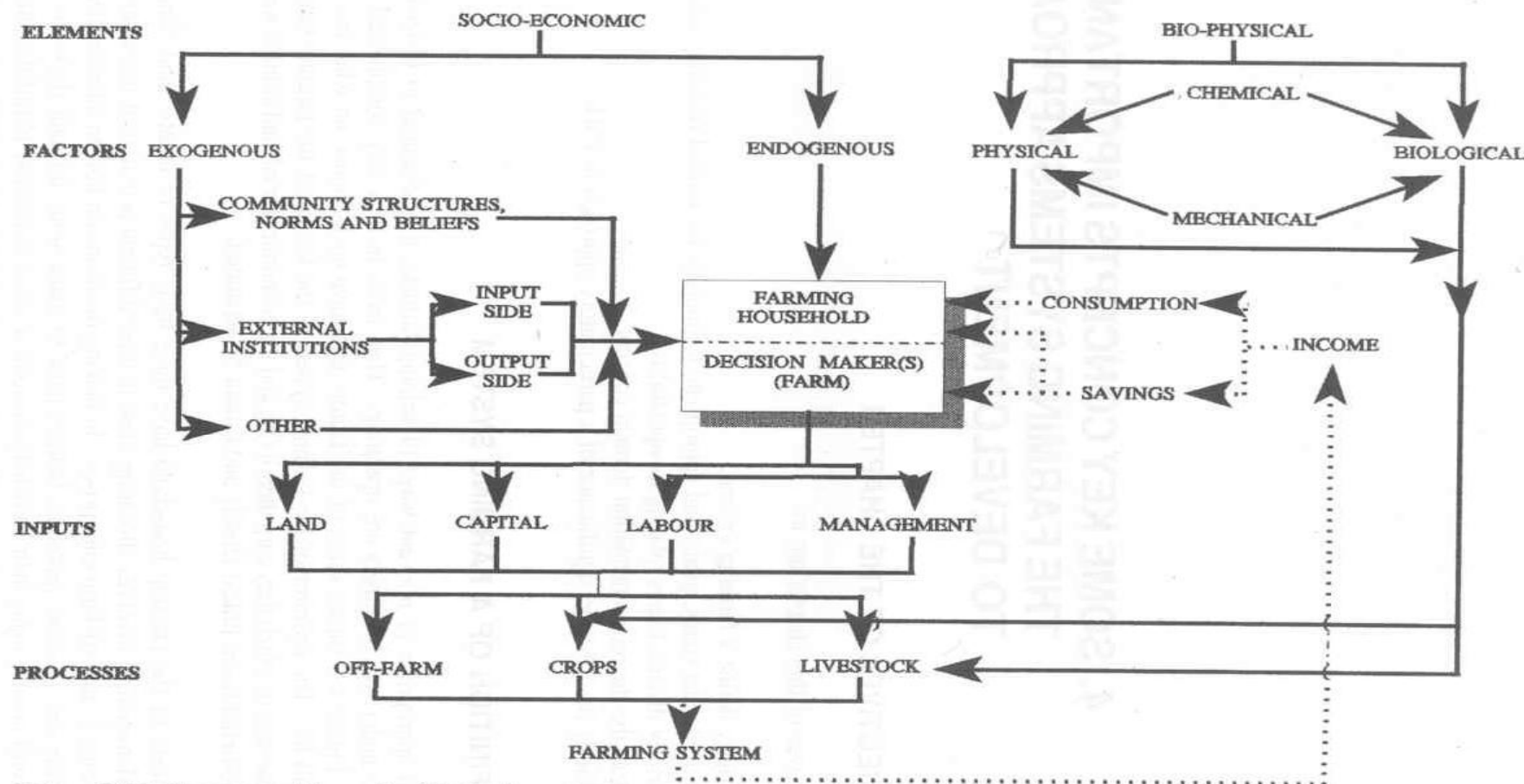


Extension Methods and Techniques

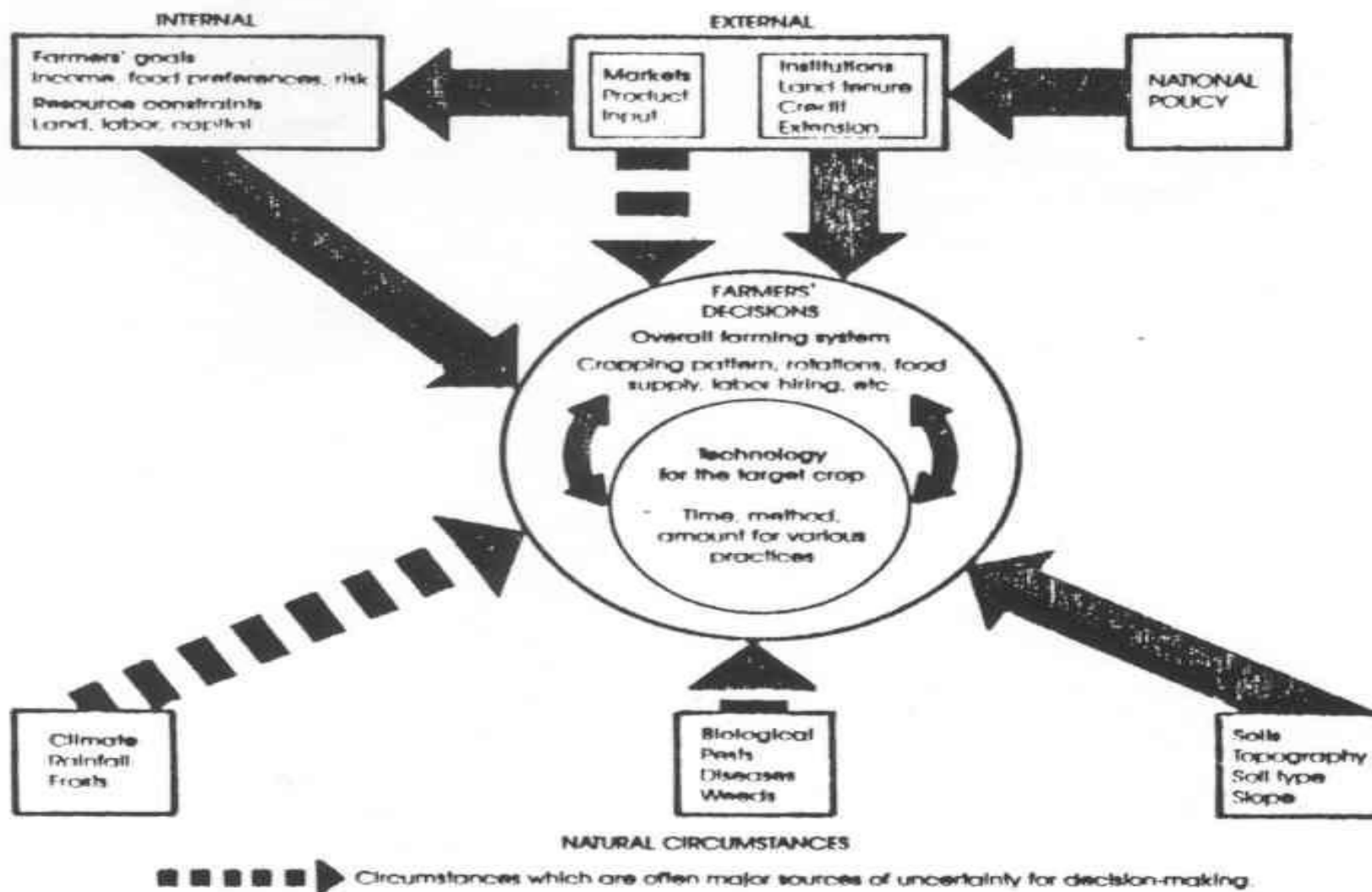
- **INDIVIDUAL:** farm/household visit, informal meetings.
- **GROUP:** lectures, seminars/courses, group meetings, demonstrations, excursions, labs.
- **MASS:** radio, TV, press, posters, newsletters, agricultural fairs, competitions.



Schematic Representation of Some Farming System Determinants



Source: Norman, et al. [1982]



Farming Systems Research /Extension (FSR/E)

Agroecological Zones

Access to Resources

- 1. *Land*. Size; type of tenure: owner/family operated
- 2. *Water*. Irrigated/non-irrigated
- 3. *Labour*. Family, hired (cost and availability)
- 4. *Inputs*. Availability of improved seeds, agricultural chemicals, fertilizers
- 5. *Markets*. Location, availability of storage and transport
- 6. *Capital*. Sources and cost of credit, ease of obtaining credit
- 7. *Information*. Availability of extension service, appropriateness of technology
- 8. *Influence*. Ability to affect technology development, transfer to be appropriate to user needs such as user control, claim-making capacity

Gender

Age

Typology of Participation

- Passive participation: People are told what is going to happen.
- Participation by giving information: Questions asked by outsiders are answered.
- Participation by consultation: People are consulted but have no part in decision-making.
- Participation for material incentives: People provide resources such as labour in exchange for material incentives.
- Functional participation: People participate in groups to meet predetermined objectives.
- Interactive participation: Local people and outsiders participate in joint analysis, project design, implementation and monitoring and evaluation.
- Self-mobilisation: People take initiative independently from external institutions

Scientist- Farmer Relationship (OFR)

- (1) Conventional (no farmer participation): scientists make the decisions alone.
- (2) Consultative (functional participation): scientists make the decisions alone, but with organized communication with farmers (one-way communication).
- (3) Collaborative (empowering participation): decision making is shared and involves organized communication among them (two-way communication.; joint decision-making).
- (4) Farmer experimentation (no researcher participation).

Interactive Approaches

Systemic learning (systems of inquiry and interaction + about systems)

- Multiple perspectives (Multi-Stakeholder)
- Group learning processes
- Context specific
- Facilitating experts
- Leading to sustained action

SOCIAL LEARNING: the collective action and reflection that occurs among different individuals and groups as they work to improve the management of human and environmental inter-relationships.

The RRA – PRA Continuum

• Nature of process	RRA	<->	PRA
• Mode	Extractive	<->	Sharing- empowering
• Outsider's role	Investigator	<->	Facilitator
• Information owned, analysed and used by	Outsiders	<->	Local people
• Methods used	RRA	<->	PRA

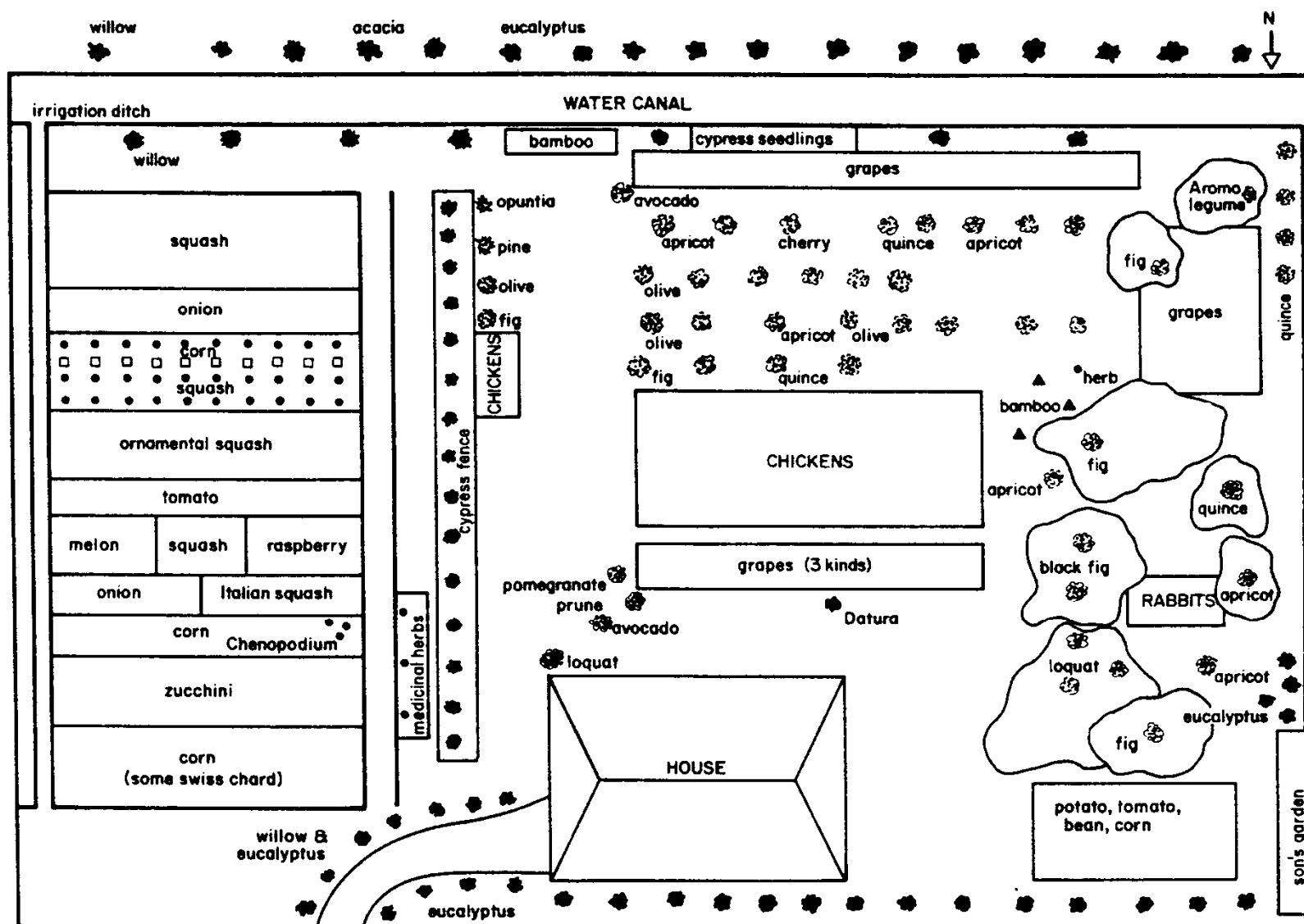
Participatory Approaches

- AEA Agro-ecological Analysis
- FPR Farmer Participatory Research
- FSR Farming Systems Research
- PAR Participatory Action Research
- PRA Participatory Rural Appraisal
- PTD Participatory Technology Development
- RAAKS Rapid Assessment of AKS
- SSM Soft Systems Methodology
- PLA Participatory Learning & Action

Menu of Methods - Tools

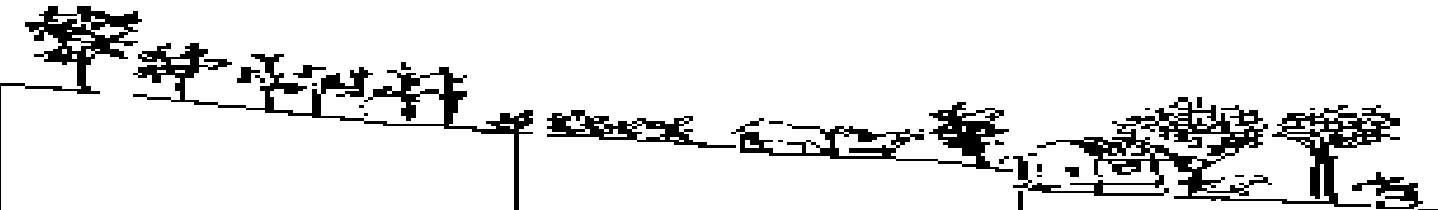
- Secondary sources
- Key informants
- Semi-structured interviews (mini surveys)
- Groups (brainstorming, focus-groups, etc.)
- Diagrams: mapping and modelling, Venn diagrams, flow/causal diagrams
- Rankings and scorings
- Transect walks (observation)
- Time lines (calendars) – trend analysis
- Stories, portraits and case studies
- Participatory planning, budgeting and monitoring
- SWOT analysis
- Role play
- Videos, photos (recently)

Farm Map



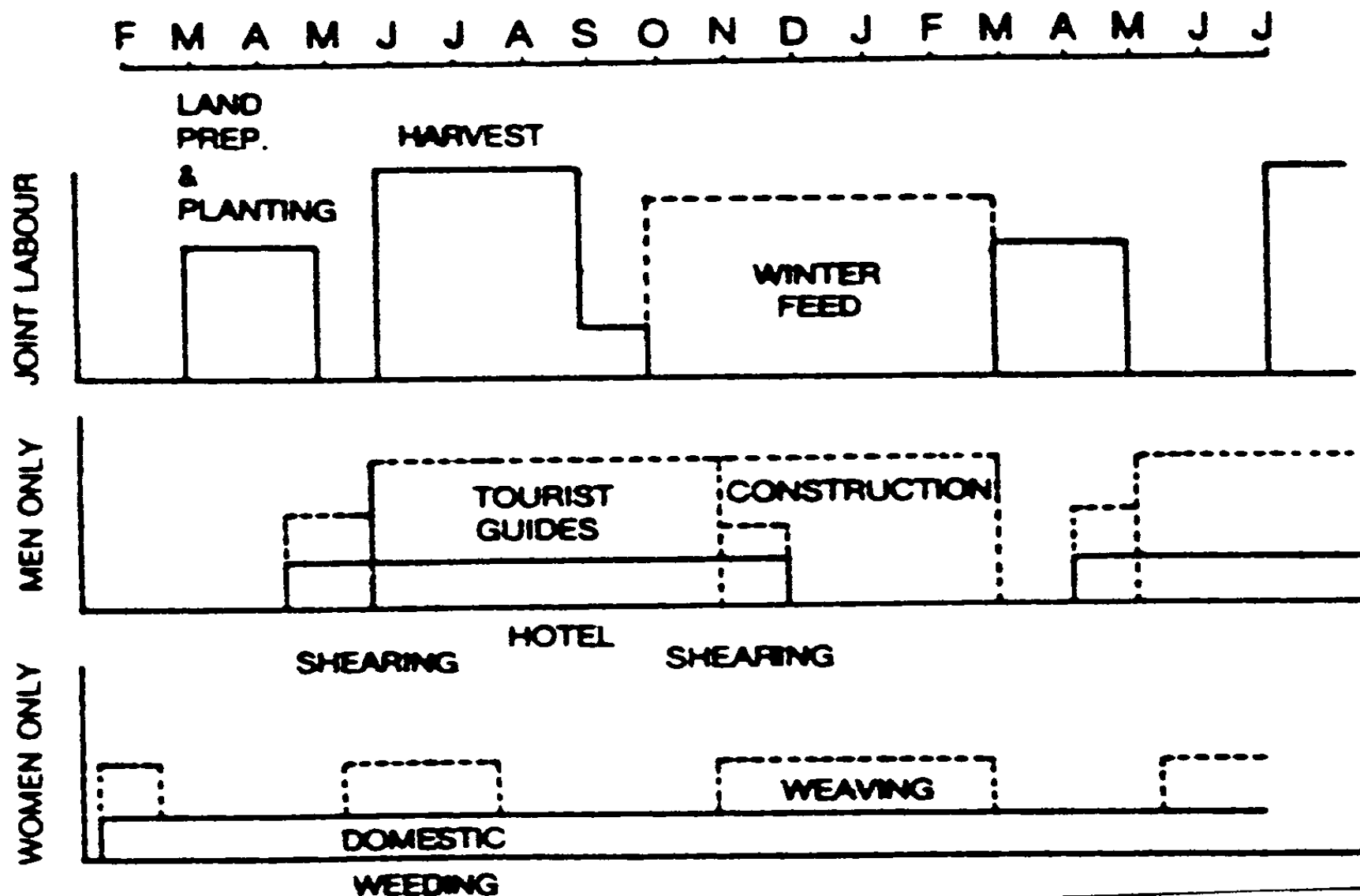


Agrosystem Transect

			
	Upland (Pogopogol)	Midland (Nanocoma)	Residential/Villages (Akoma)
Soil type	Gravel (Pmogoch) Stony gravel (Akaboch)	Gravel (Pmogoch) Loam (Dobopu) Clay loam (Amoch-Dob) Clay (Amoch)	Gravel (Pmogoch) Loam (Dobopu) Clay loam (Amoch-Dob) Clay (Amoch)
Water source	Rain (Sere-mu)	Rain (Sere-mu)	Stream (Dauwai) Well (Abura)
Crops	Cassava (Bunkye) Maize (Abura)	Plantain (Erode) Cassava (Bunkye) Maize (Abura) Sugar cane (Anwawo) Yam (Bayero) Cocoyam (Fankani) Tomato (Anwawo)	Plantain (Erode) Banana (Ewadu)
Vegetables			Chili pepper (Haku) Eggplant (Ntrowi) Okra (Neruma)
Trees	Avocado (Faya) Liriodendron (Lecucina) Liriodendron (Lecucina)	Dalmandra (Cilindra) (Nyamocush) (Ekwamfere)	Mango (Mango) Orange (Akutu)
Herages		Woodlot (Naukum) Grass (Sere)	
Animals		Goats (Habun) Sheep (Owuan) Goat (Apinkye) Chicken (Akoko)	Sheep (Odwun) Goat (Apinkye) Chicken (Akoko) Duck (Dakodabo)

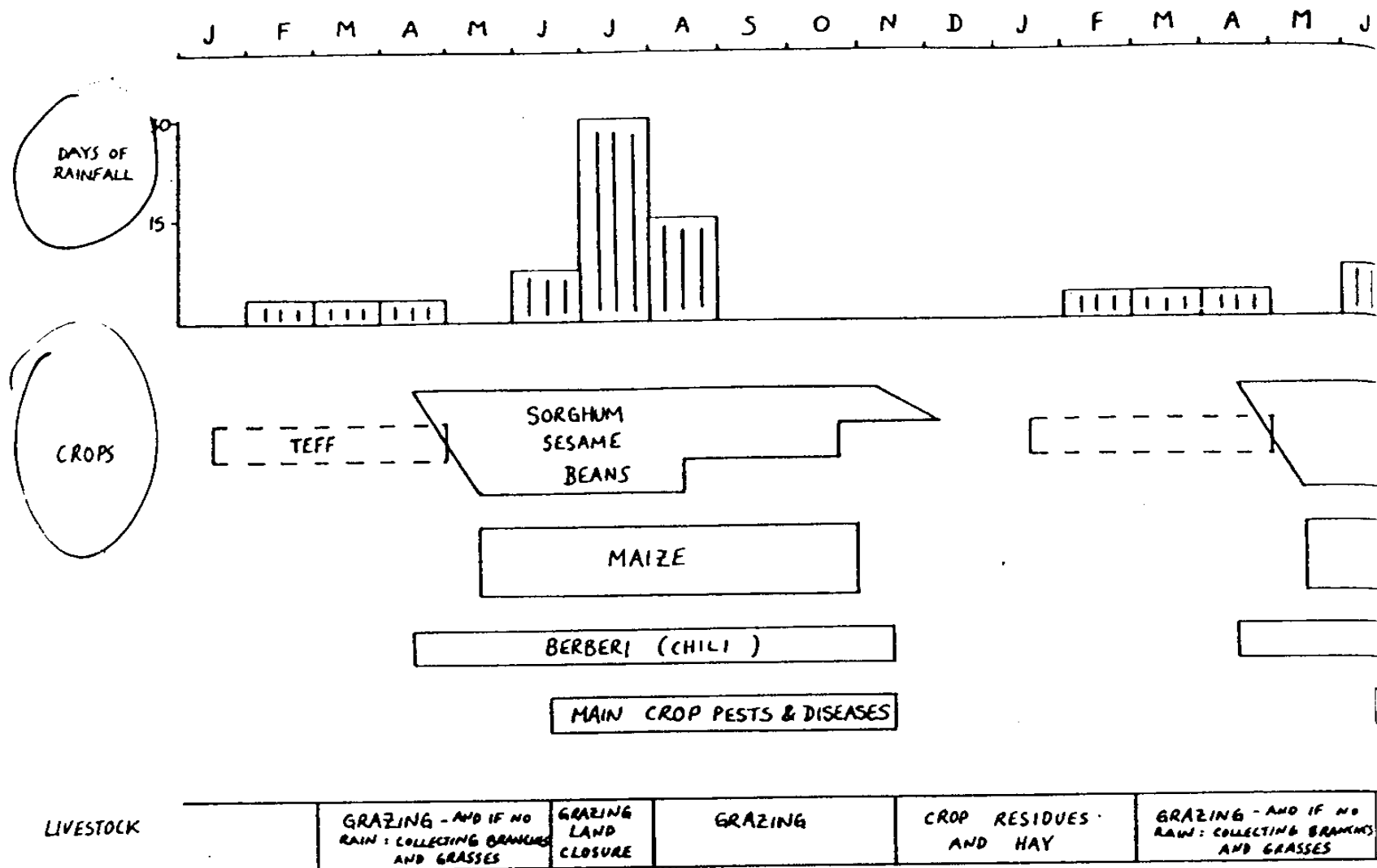


Timelines





Timelines

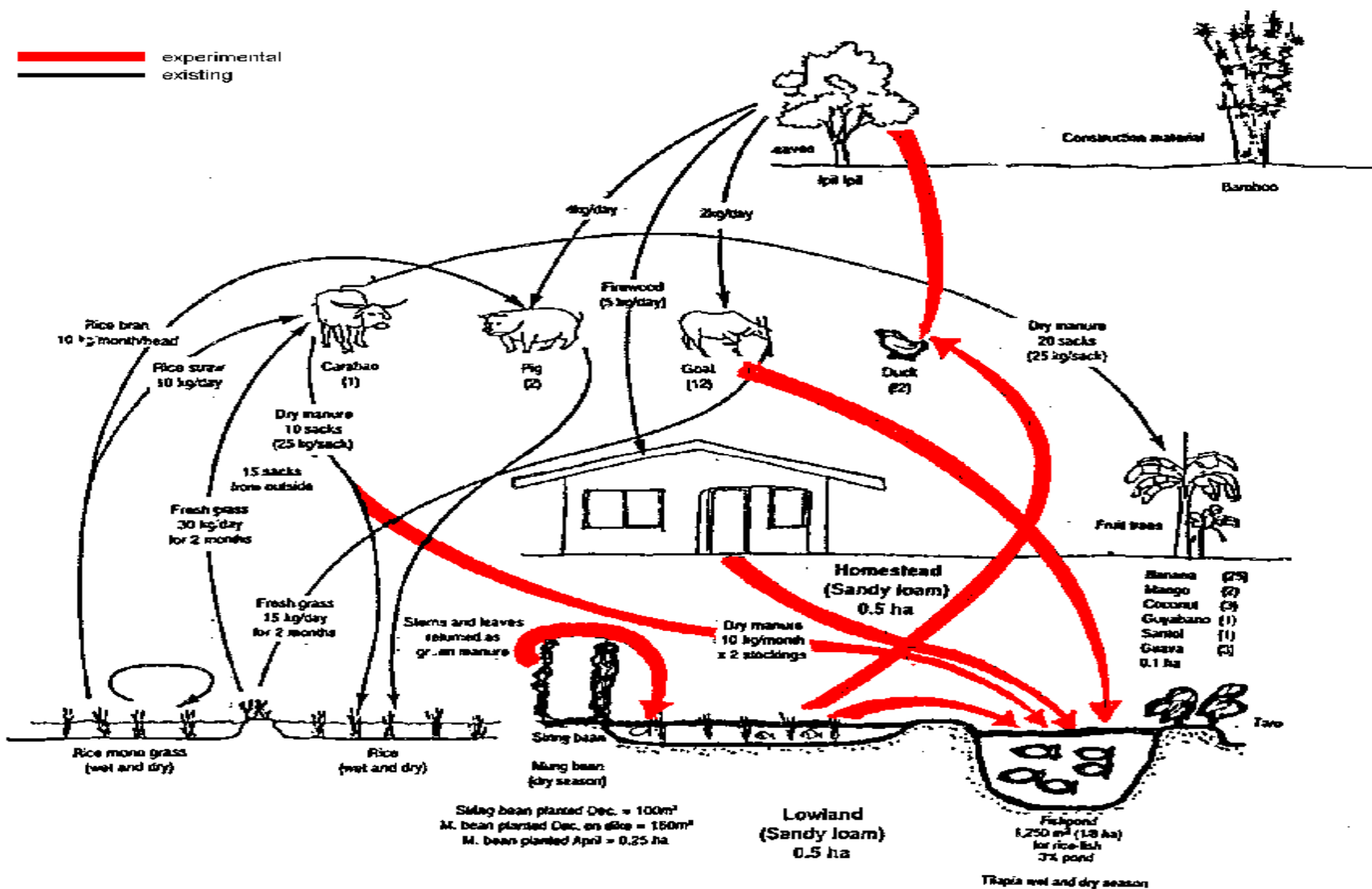


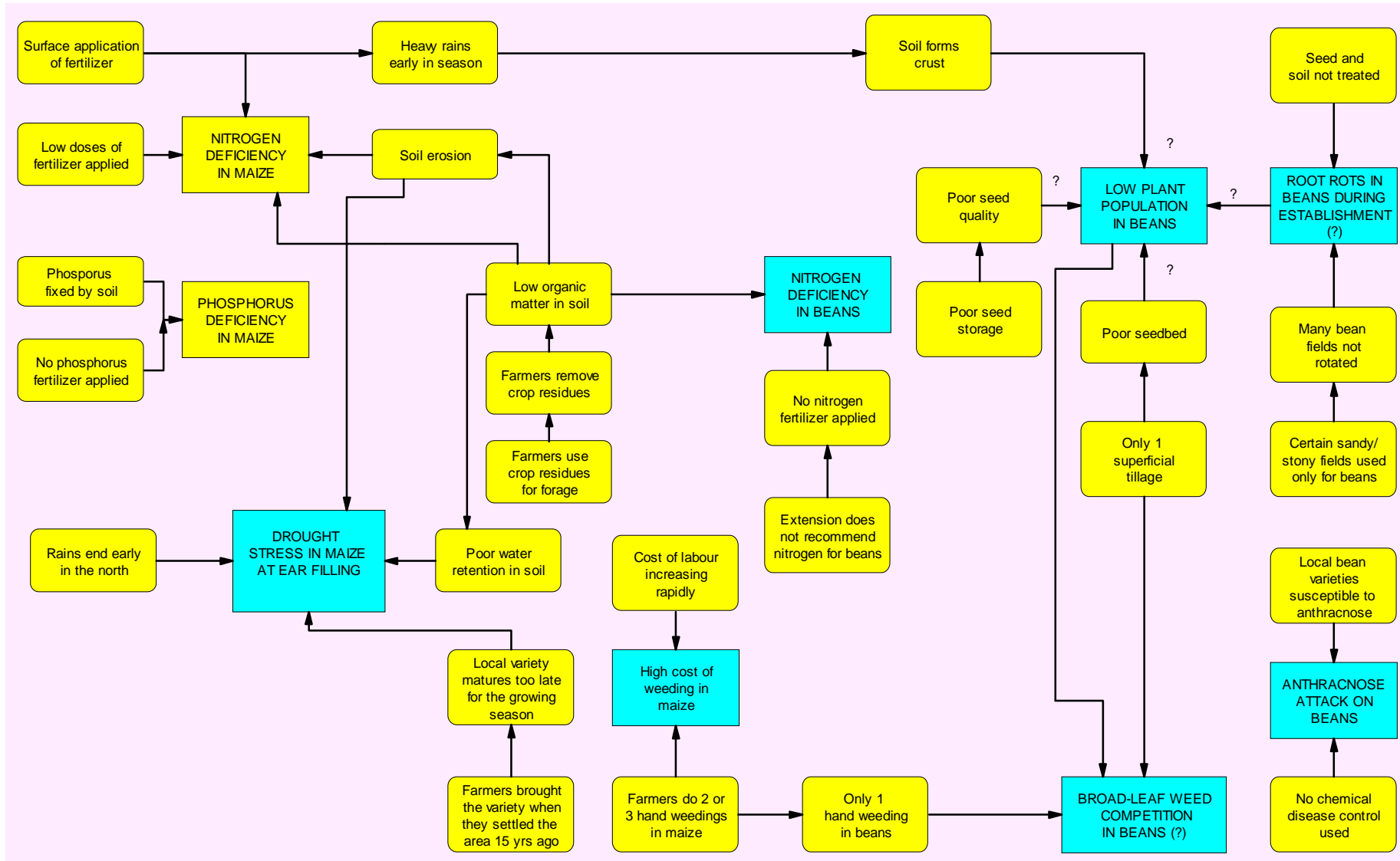


Education and Culture DG

Lifelong Learning Programme

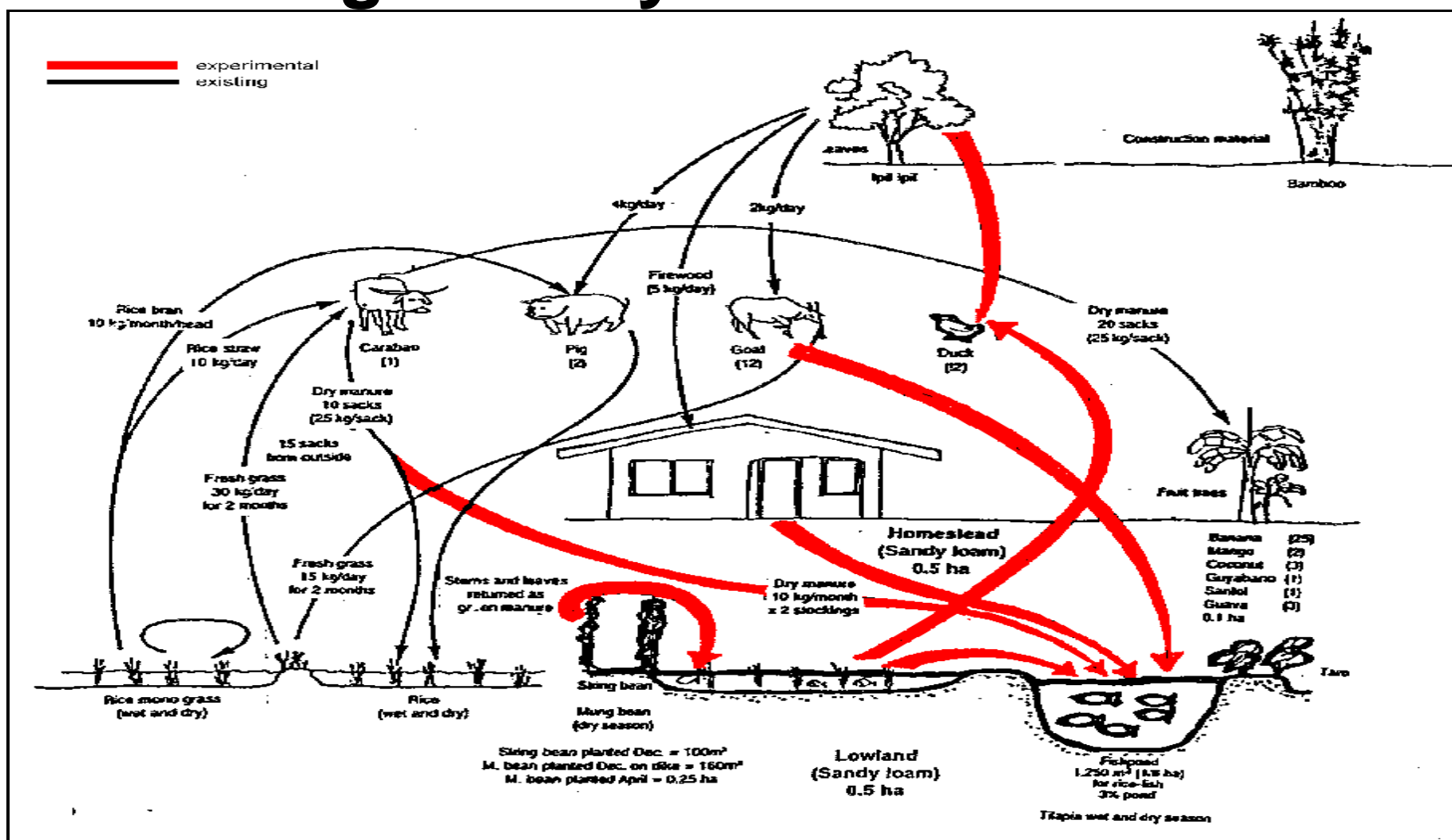
Agroecosystem Models







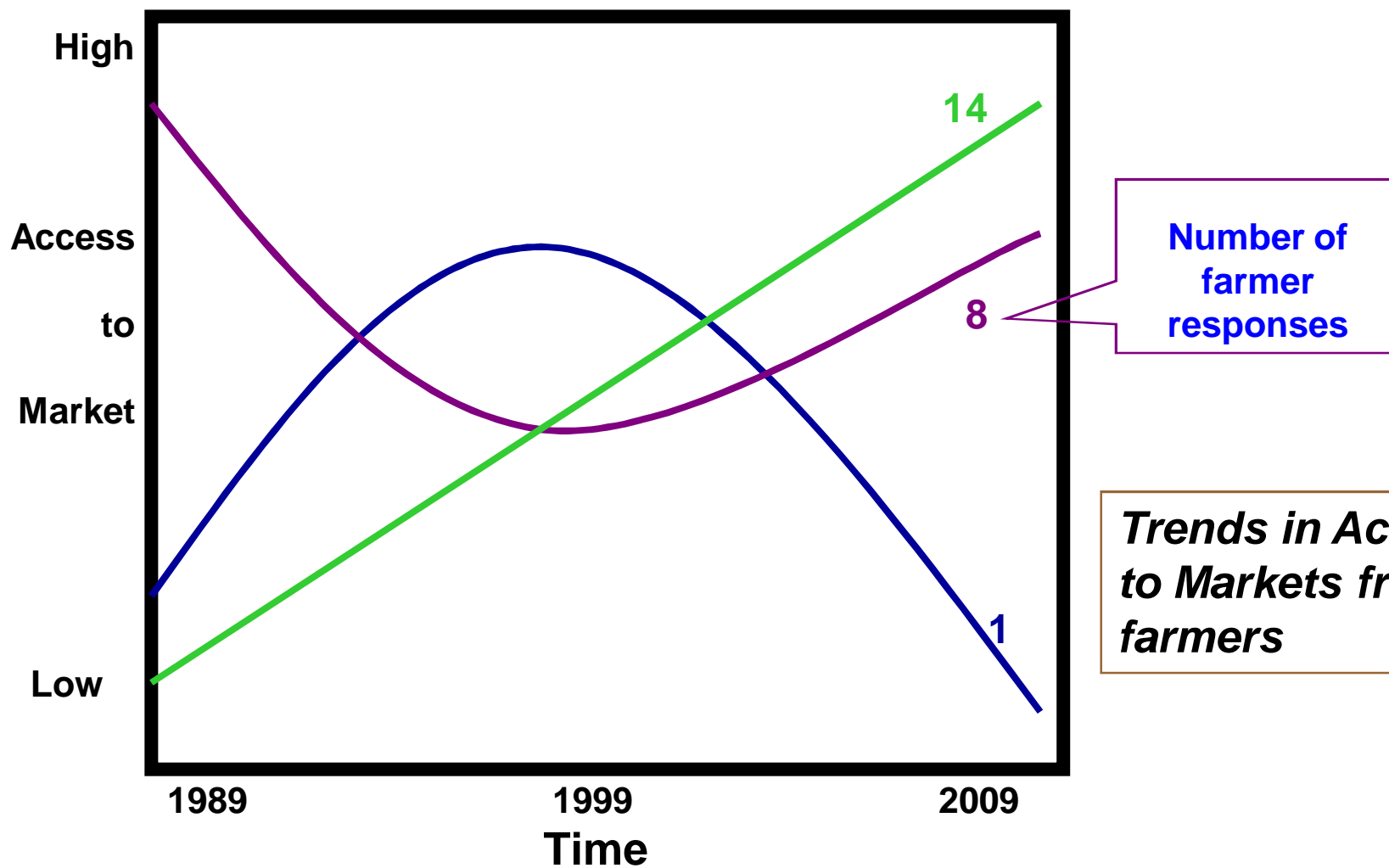
Agroecosystem Models



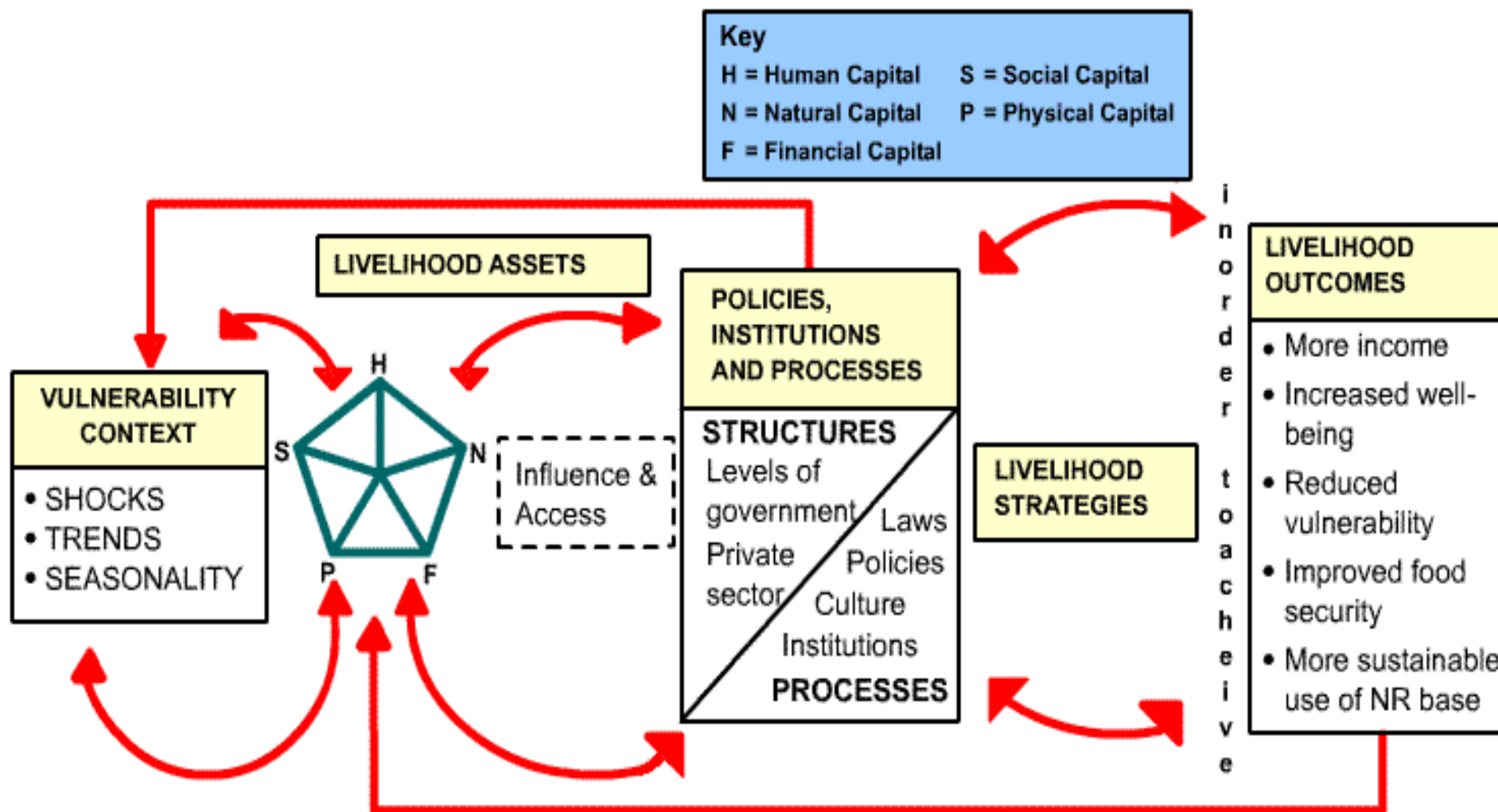


Ranking

<u>Production Constraint</u>	<u>Ranking by Researchers</u>	<u>Ranking by Farmers</u>
Lack of water for livestock	4	1
Crop water stress	2	2
Livestock Diseases	1	3
Crop pests	6	4
Low soil Fertility	2	5
Lack of Firewood	5	5
Weeds	-	5
Lack of fodder	-	8



Sustainable Livelihoods Framework



Extension Planning- Communication Methods and Techniques

3. Conclusions

Programming Process

Identification of the basis for programming: philosophies, policies, and procedures.

Situation analysis of community and clientele (data collection & analysis)

Identification of desired outcomes (problems & needs => objectives)

Programme of action: calendar of events and activities

Implementation

Evaluation

Selection of Extension Techniques

1. Is the chosen method adapted to whether we wish to change knowledge, skills, attitude, or behaviour?
2. Are the educational activities clearly specified so that we know what the farmer will see, hear, discuss, and carry out?
3. Are the different methods integrated in such a way that they reinforce each other?
4. Does the planned time scale make it possible to carry out all of these activities well?
5. When choosing learning activities, has the extensionist adequately considered the needs, skills, and means of the target group?

OA is a typical case of an integrated package of activities [+knowledge] (production processes and new products, new organization, new marketing channels, etc.).

OA is knowledge intensive and context dependent:

- the farmer has to spend time on field inspection and observation; s/he must be able to interpret observations and indicators; s/he must rely less of external farm inputs;
- + s/he must resist (negative) opinions and anxieties of neighbours, etc.

- **Principles (IFOAM)**
 - the principle of health: “Organic agriculture should sustain and enhance the health of soil, plant, animal and human as one and indivisible”;
 - the principle of ecology: “Organic agriculture should be based on living ecological systems and cycles, work with them, emulate them and help sustain them”;
 - the principle of fairness: “Organic agriculture should build on relationships that ensure fairness with regard to the common environment and life opportunities”; and
 - the principle of care: “Organic agriculture should be managed in a precautionary and responsible manner to protect the health and well-being of current and future generations and the environment”.
- **Input substitution vs. systemic re-design**

- **Sustainable farming**
 - a thorough incorporation of natural processes into agricultural production processes
 - a reduction of the use of external and non-renewable inputs
 - a full participation of farmers in all processes of problem analysis and technology development, adaptation and extension
 - a more equitable access to productive resources and opportunities
 - a greater productive use of local knowledge and practices
 - an increase in self-reliance among farmers
 - an improvement in the match between cropping patterns and the productive potential and environmental constraints
- **Individual(s) vs. area/group/village**

3.i. Summary

- different philosophies (top-down vs. bottom-up)
 - different forms of agriculture (productivist vs. OA)
 - different contexts (agro-ecological, socio-cultural, economic, technological)
 - different problems & needs -> different objectives
- ⇒ differential selection of extension/communication methods/techniques/tools
- ⇒ differential extension programming



	TRANSFER OF TECHNOLOGY	PARTICIPATORY EXTENSION
Main objective	transfer of technology	empower farmers
Analysis of needs & priorities	outsiders	farmers facilitated by outsiders
Transferred by outsiders to farmers	messages package of practices	principles methods basket of choices
The 'menu'	fixed	according to choice
Farmers' behaviour	hear messages act on recommendations adopt, adapt or reject package	use methods apply principles choose from basket and experiment
Outsiders' desired outcomes emphasis	widespread adoption of package	wider choices for farmers farmers' enhanced adaptability
Main mode of roles of extension	teacher trainer	facilitator searcher for and provider of choice

3.ii. References

Basic bibliography

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- Swanson, B. (1984) Agricultural Extension: A reference manual. FAO, Rome.

Web pages / links

- <http://www.fao.org>
- <http://slim.open.ac.uk>
- <http://www.insightproject.net/>
- <http://www.idrc.ca>
- <http://www.iisd.org>
- <http://www.ezd.si>
- <http://www.eldis.org>
- <http://www.prolinnova.net>

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